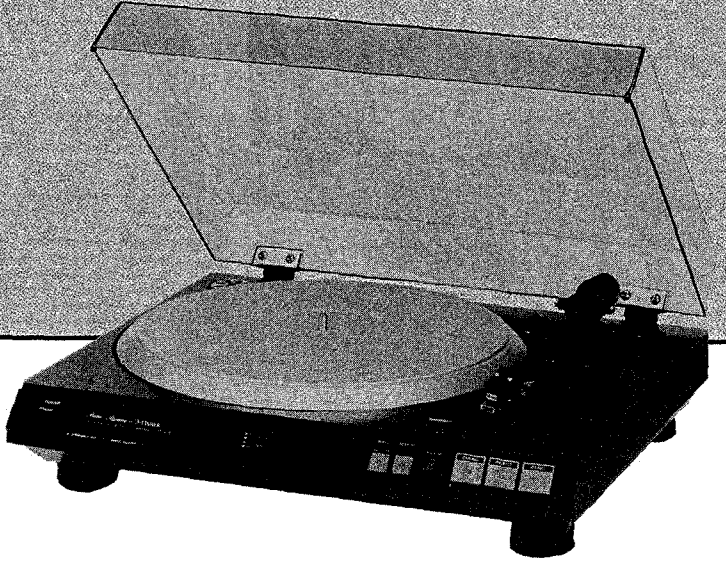
SERVICE MANUAL

FISHER

MT-275

DC-Servo Direct Drive
Electronic Control
Full-Automatic Turntable

(EUROPE)



CONTENTS

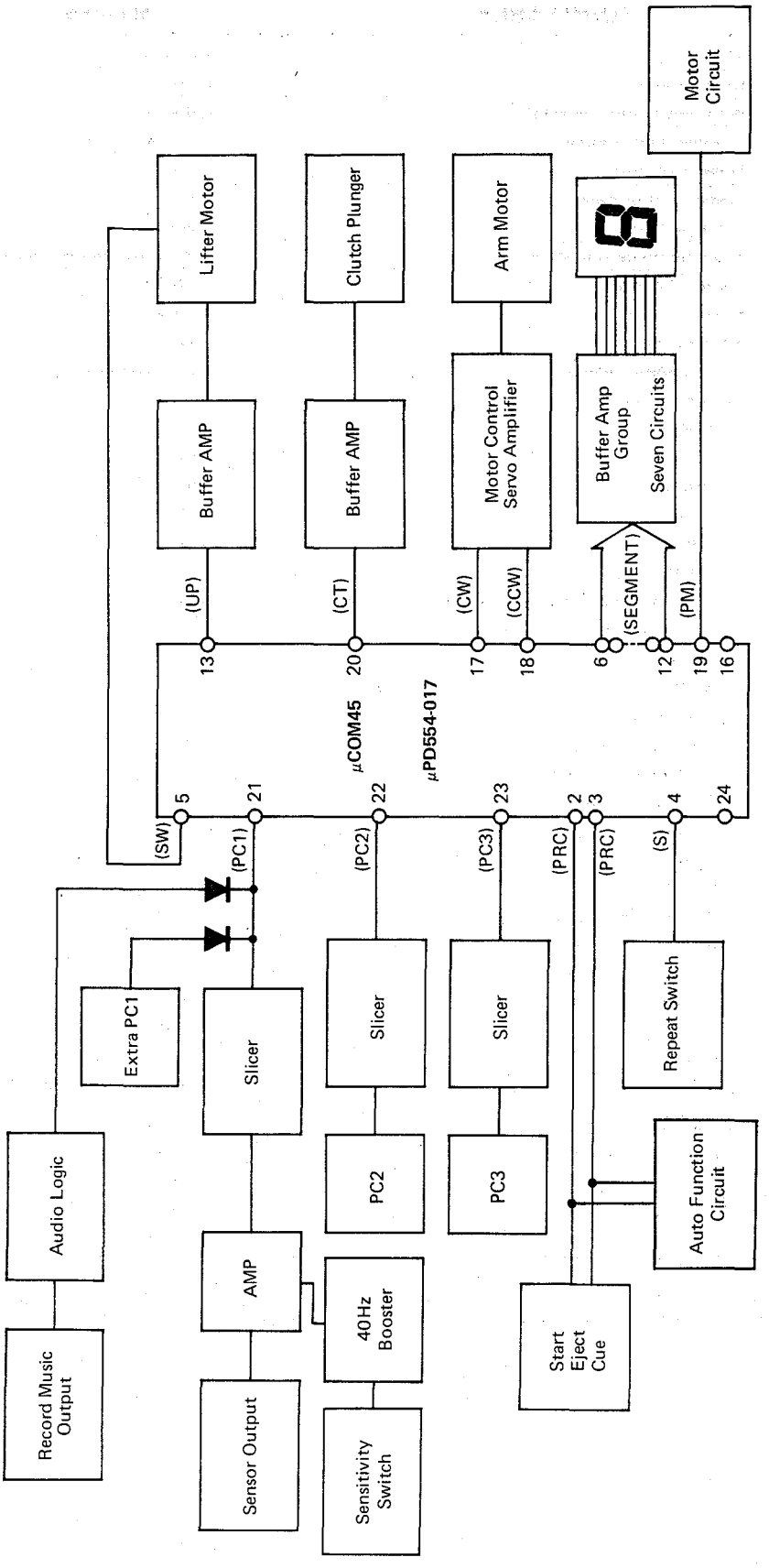
Specifications 3
Block Diagram 4
IC Signal Flow & Equivalent Circuit 5,6
Changing the Stylus 7
Adjustment 7,8,9
Printed Circuit Board & Parts List 10,11,12,13,14,15,16
Motor Control Printed Circuit Board 17
Motor Control Schematic Diagram 18
Schematic Diagram 19,20
Point to Point Wiring Diagram 21,22
Cabinet & Turntable Exploded View 23,24
Parts List 25,26
Semiconductor Lead Identification 27

SPECIFICATIONS

TURNTABLE	MT-275
Motor	DC Servo
Drive System	Direct
Wow and Flutter (WRMS)	0.035 %
Rumble (DIN 45539B)	−70 dB
Speed Variation	±0.3 %
Speed Control Range	±3 %
Tracking Force	2 gram
Tracking Force Adjustment	Calibrated Counterweight
Platter Diameter	12-5/16"
Platter Weight	2.5 lbs.
Strobe Light	Yes
Record Speed Selector	33-1/3 rpm/45 rpm
Auto Function	
Start	Yes
Stop	Yes
Repeat	Yes
Cueing	Yes
Reject	Yes
Automatic	
Tone Arm Return at End of Record	Yes
Manual Function	
Start	Yes
Stop	Yes
Tone Arm Data	
Resonance	<10 Hz
Balance Adjustment	Counterweight
Effective Length	222 mm
Shape	Straight
Bearing-Type	
Horizontal	Pivot
Friction Sensitivity	0.15 gram
Vertical	Pivot
Friction Sensitivity	0.2 gram
Max. Tracking Error	±1.5°
Anti-Skate Control	Fixed
Cueing	Viscous Damped
Cartridge Supplied	Stereo Magnetic (MG-100S)
GENERAL	
Power Requirements	110/220 V AC (50 Hz)
Power Consumption	23 W
Dimensions (W x H x D)	17-1/3" x 5-1/2" x 14-1/2"
Weight (approx.)	18.4 lbs.

- Because its products are subject to continuous improvement, Fisher Corporation reserves the right to modify product designs and specifications without notice and without incurring any obligation.

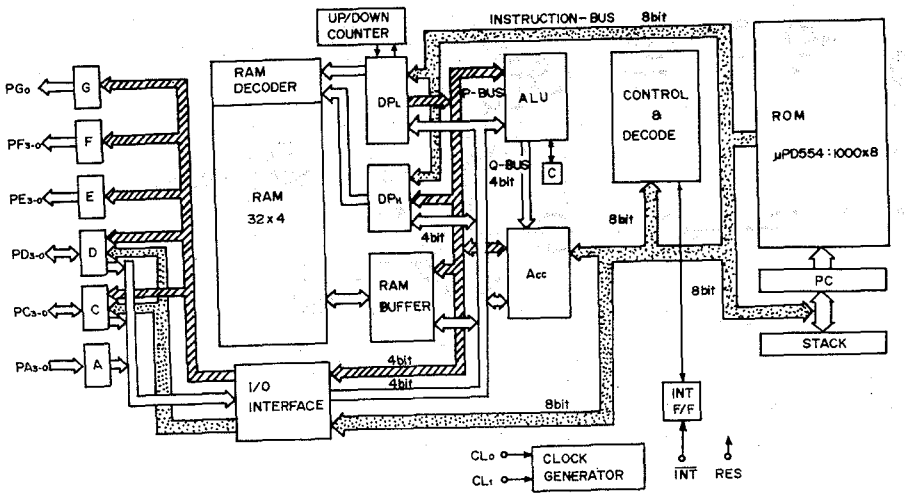
BLOCK DIAGRAM



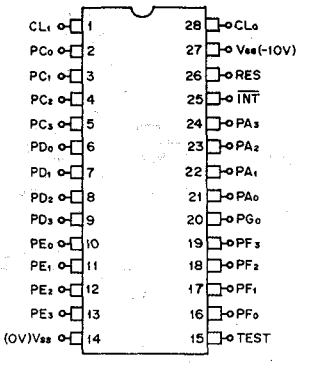
IC SIGNAL FLOW & EQUIVALENT CIRCUIT

MICROCOMPUTER IC μPD554-017 (μCOM45)

SIGNAL FLOW

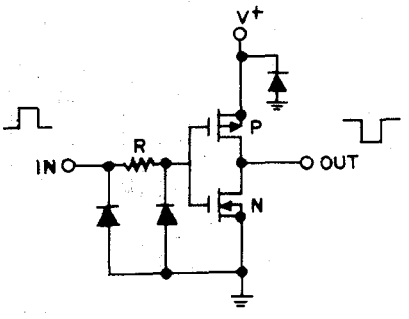


TOP VIEW

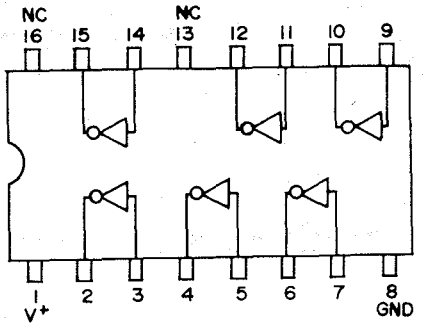


HEX BUFFER/CONVERTER (INVERTING) MSM4049

EQUIVALENT CIRCUIT

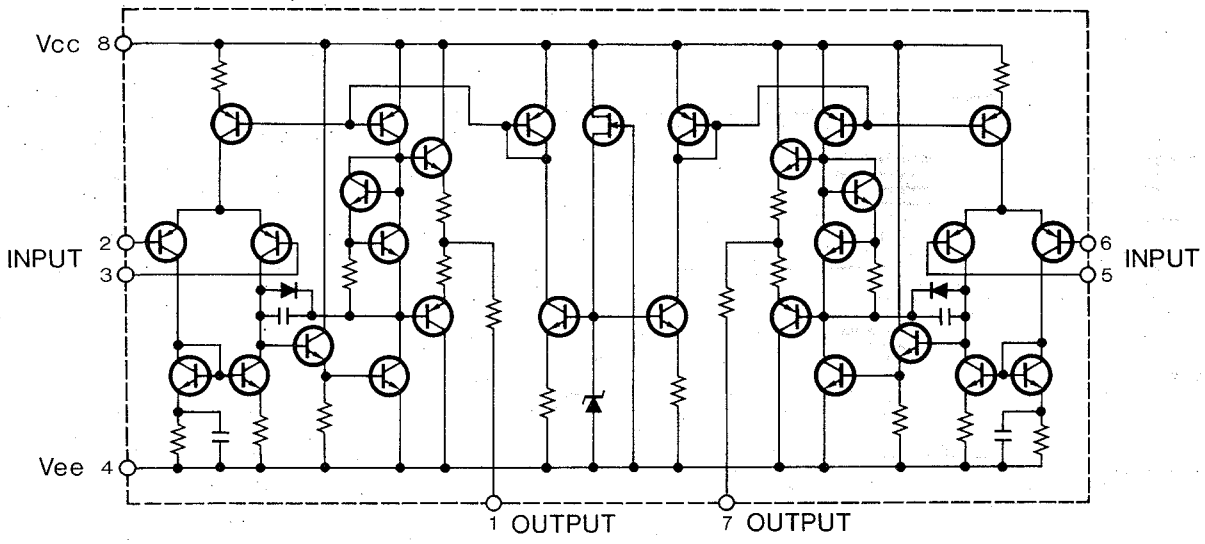


TOP VIEW



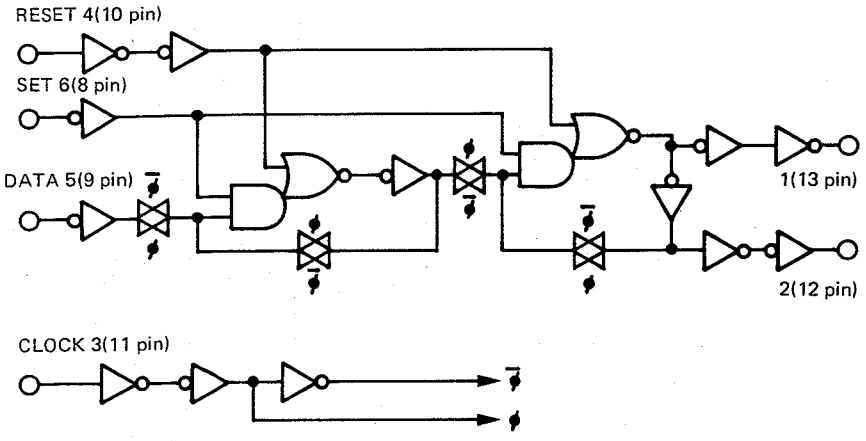
IC SIGNAL FLOW & EQUIVALENT CIRCUIT (Continued)

EQ AMP IC LA6458D

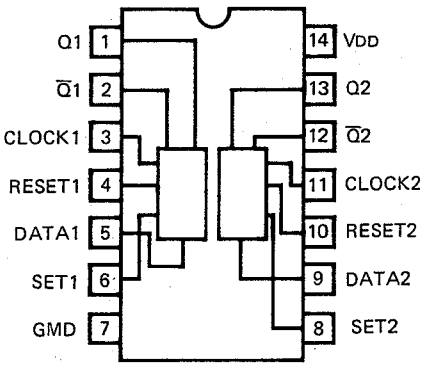


DUAL D-TYPE FLIP-FLOP IC LC4013B

EQUIVALENT CIRCUIT



TOP VIEW



CHANGING THE STYLUS

1. Turn off the power to the amplifier and the turntable.
2. Carefully grasp the stylus assembly and pull it forward and downward away from the cartridge body.
3. Install the ST-100SD replacement stylus assembly by gently pushing it upward and backward into the cartridge body.

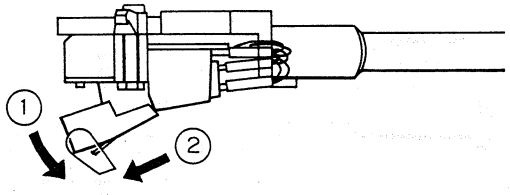


Fig. 1

ADJUSTMENT

CLOCK FREQUENCY ADJUSTMENT

1. Connect a frequency counter to TP5 (+) and Pin 12 (–) on the Microcomputed Control P.C.Board. (Fig. 7)
2. Adjust L01, so that the frequency counter indicates 400 kHz.

GAIN ADJUSTMENT OF PC2 AND PC3

1. Set the A/M Select Switch to "M" position.
2. Short the circuit between R22 (270 ohms) and Pin 4 through the resistor (390 ohms).(Fig. 3)
3. Connect an oscilloscope to TP8 and TP2.
4. Observe the oscilloscope on TP8 side. When the tone arm is moved inwards, the bright point changes as illustrated in Fig. 2. Set the tone arm to the dip point.
5. Keeping the tone arm on the dip point and observing the oscilloscope on TP2 side, adjust to the point where the semi-fixed VR04 (5KB) is changed from high to low.(Fig. 3)
6. Connect the oscilloscope to Pin 14 and TP3.
7. When the tone arm is moved inwards, observing the oscilloscope on Pin 14 side, the bright point changes as illustrated in Fig. 4. Set the tone arm to the dip point.
8. Keeping the tone arm on the dip point and observing the oscilloscope on TP3 side, adjust to the point where the semi-fixed VR05 (5KB) is changed from high to low.
9. Disconnect the resistor (390 ohms) and the oscilloscope.
   Note: Perform the adjustment where less effect of external light is received.

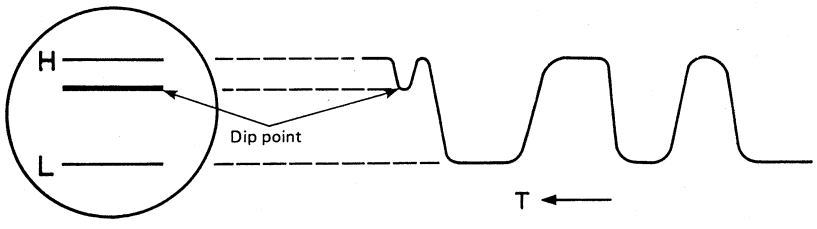


Fig. 2

ADJUSTMENT

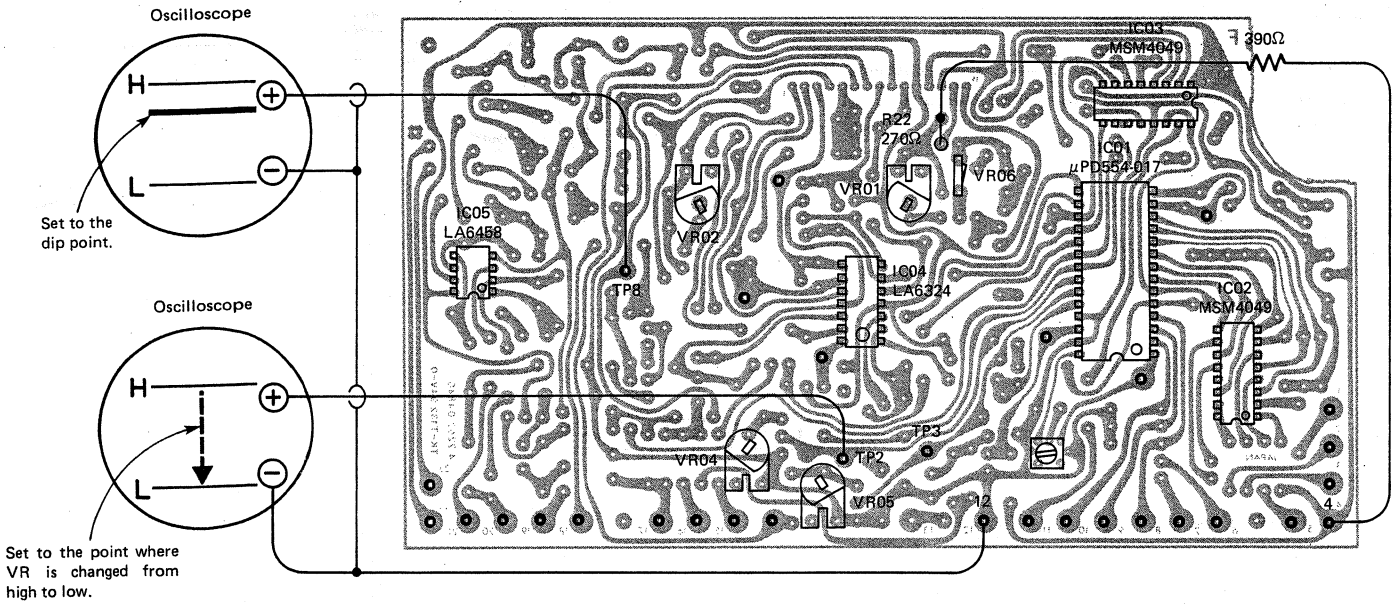


Fig. 3

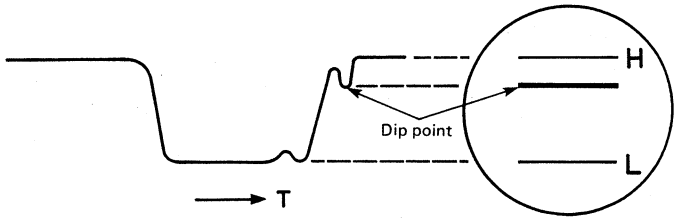


Fig. 4

RECORD SIZE ADJUSTMENT

1. Connect an oscilloscope to TP2 on the Microcomputed Control P.C.Board.
2. Set the cartridge on the outer circumference of the 30 cm record and adjust the mechanical trimmer to the change-over point of the signal (middle point between high and low).
3. Perform the same adjustment for the 25 cm and 17 cm records as described in item 2.
4. Connect the oscilloscope to TP3.
5. Set the A/M Select Switch to "M" position.
6. Set the cartridge on the last groove of the record and adjust the mechanical trimmer following the same method as described in item 2.
7. After the adjustment, set the A/M Select Switch below the turntable to "A" position and secure the mechanical trimmer with paint or glue.

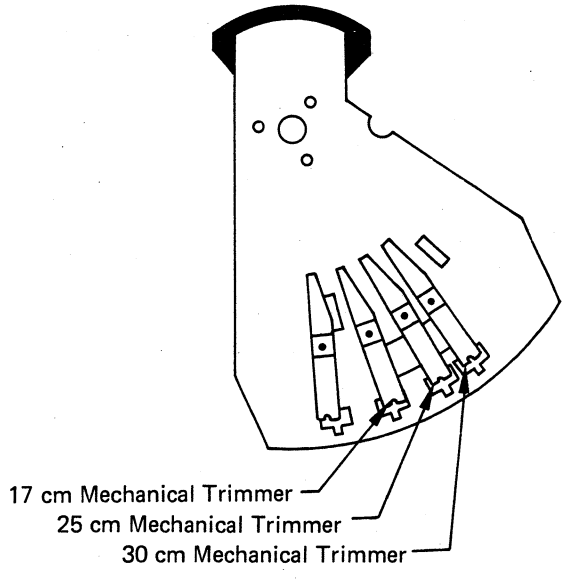


Fig. 5

ADJUSTMENT (Continued)

STYLUS HEIGHT ADJUSTMENT

1. Set the main body of the player horizontally.
2. Set the cartridge in "CUE UP" mode with the Cue Up Lever and adjust the stylus height to 4.0±0.3 mm over the record.

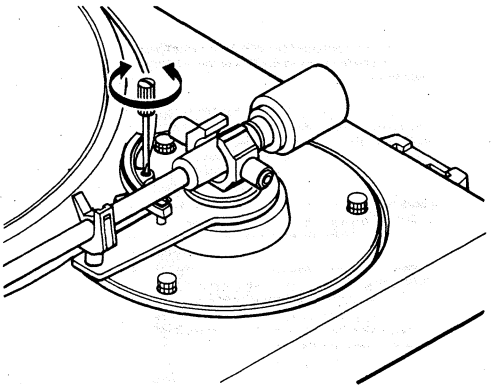


Fig. 6

PC1 GAIN ADJUSTMENT

1. Connect a DC voltmeter to TP4 (+) and Pin 12 (–).
2. Place a standard reflector on the turntable sheet and set the cartridge over the center of the reflector.
3. Adjust VR02 (200KB) to 3.2 V. If the voltage is still less than 3.2 V by turning VR02, readjust VR02 after disconnecting R62 (330 k-ohms).

STYLUS DROPPING POINT ADJUSTMENT AFTER FIRST MUSIC PLAY

1. Set the main body of the player horizontally and connect the amplifier, the speakers, etc., to set the unit in the sound producing condition.
2. Set the Approach Adjusting VR to "Center Click" position.
3. Use a record on which many pieces of music are recorded and adjust VR01 and VR06 by turning them to prevent the sound cut-off of the first part and the sound residual of the last part of music.

SPEED ADJUSTMENT

1. Set the main body of the player horizontally and the Speed Adjusting VR almost to the center. Set the speed control to "33-1/3 r.p.m." position.
2. Adjust VR01 inside the Motor Assembly, so that the stroboscope looks still.
3. Set the speed control to "45 r.p.m." position and check that the specified stroboscope looks almost still.

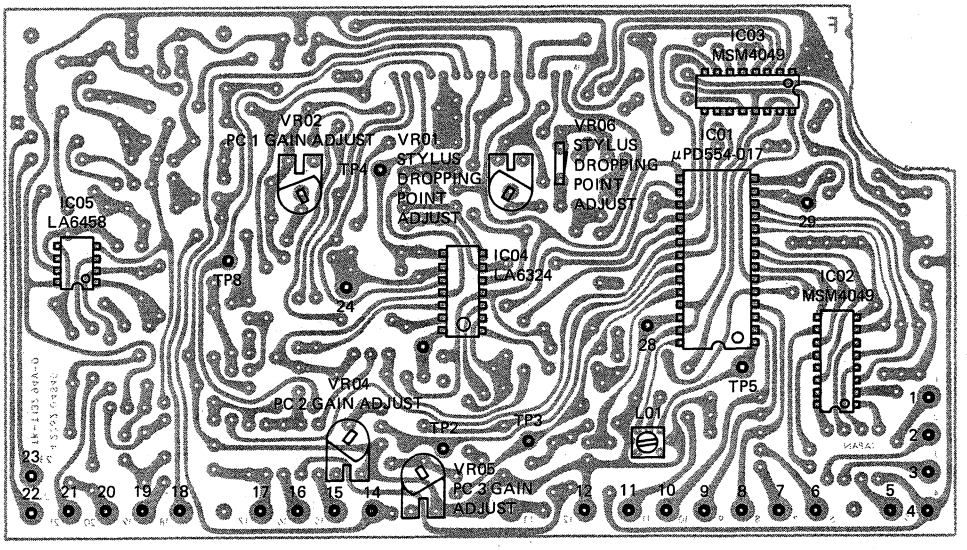
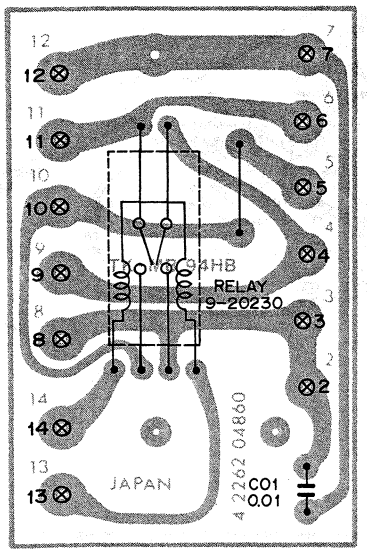
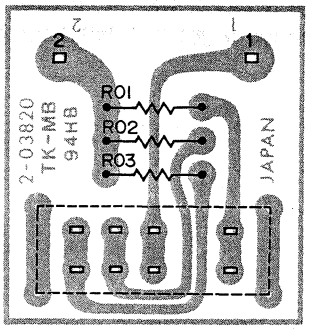


Fig. 7

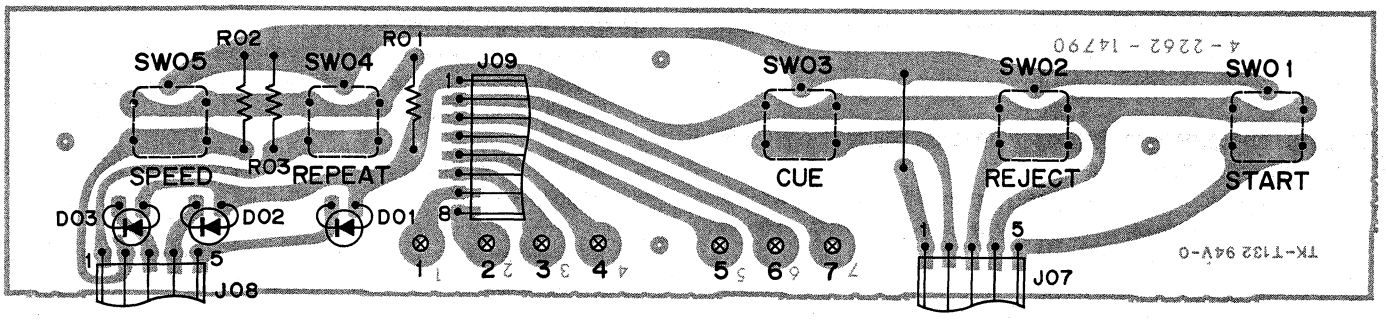
MUTING P.C.BOARD
(BOTTOM VIEW)



SENSOR SWITCH P.C.BOARD
(BOTTOM VIEW)



TOUCH SWITCH P.C.BOARD
(BOTTOM VIEW)



PARTS LIST

MUTING P.C.B. Assy
131 0 4001 01741

Ref. No.	Parts Number	Description
	4 2329 20230	Relay Leed
	4 2372 00060	Receptacle
	CAPACITOR	
C01	C1HFYK103APA	Mylar 0.01 μF 50V ±10%

TOUCH SWITCH P.C.B. Assy
131 0 4001 13540

Ref. No.	Parts Number	Description
SW01,02 03,04 05	4 2312 05800	Keyboard Switch
	SEMICONDUCTORS	
D01,02 03	4 2029 72090	L.E.D., LN242RP

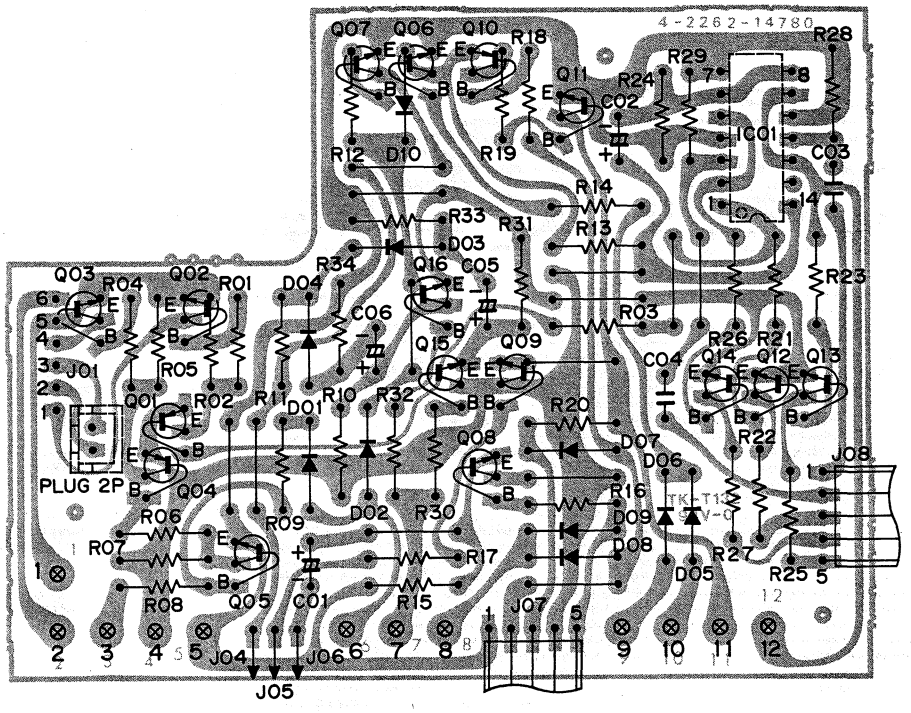
Ref. No.	Parts Number	Description			
	RESISTORS				
R01	R2EDZJ102APA	Carbon	1k	1/4W	±5%
R02,03	R2EDZJ104APA	Carbon	100k	1/4W	±5%

SENSOR SWITCH P.C.B. Assy
131 0 4001 02420

Ref. No.	Parts Number	Description			
	4 2312 02120	Switch Slide			
	RESISTORS				
R01	R2EDPJ222A	Carbon	2.2k	1/4W	±5%
R02	R2EDPJ682A	Carbon	6.8k	1/4W	±5%
R03	R2EDPJ223A	Carbon	22k	1/4W	±5%

AUTO FUNCTION P.C.BOARD

(BOTTOM VIEW)



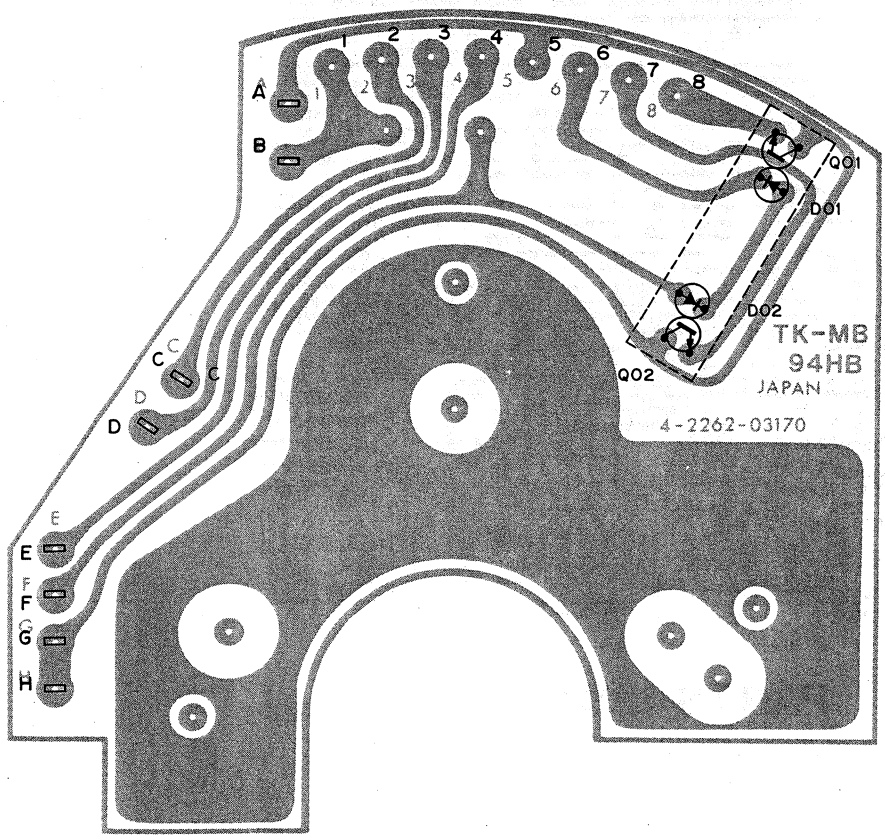
PARTS LIST

AUTO FUNCTION P.C.B. Assy
131 0 4001 13530

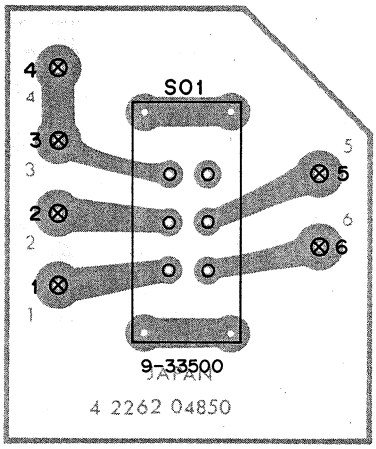
Ref. No.	Parts Number	Description
	4 2362 00770	Plug 2P
	CAPACITORS	
C01	C1CRY-336APA	Electrolytic 33 μF 16V
C02	C1HRY-105APA	Electrolytic 1 μF 50V
C03,04	C1HYYZ103APA	Ceramic 0.01 μF 50V +80,–20%
C05,06	C1HRY-105APA	Electrolytic 1 μF 50V
	SEMICONDUCTORS	
D01,02 03,04,05,06,07,08,09,10	205 5 9040 44210	Diode, DS-442
IC01	206 5 9464 01310	IC, LC4013B
Q01	203 5 7230 60850	TR 2SA608 E, F
Q02,03	203 5 5000 53650	TR 2SC536 E, F
Q04	203 5 7230 60850	TR 2SA608 E, F
Q05,06 07,08,09	203 5 5000 53650	TR 2SC536 E, F
Q10	203 5 7230 60850	TR 2SA608 E, F
Q11,12 13,14,15,16	203 5 5000 53650	TR 2SC536 E, F
	RESISTORS	
R01	R2EDZJ104APA	Carbon 100k 1/4W ±5%
R02	R2EDZJ223APA	Carbon 22k 1/4W ±5%
R03,04	R2EDZJ104APA	Carbon 100k 1/4W ±5%
R05	R2EDZJ223APA	Carbon 22k 1/4W ±5%

Ref. No.	Parts Number	Description
	RESISTORS	
R06	R2EDZJ104APA	Carbon 100k 1/4W ±5%
R07	R2EDZJ223APA	Carbon 22k 1/4W ±5%
R08	R2EDZJ104APA	Carbon 100k 1/4W ±5%
R09	R2EDZJ473APA	Carbon 47k 1/4W ±5%
R10	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R11	R2EDZJ222APA	Carbon 2.2k 1/4W ±5%
R12	R2EDZJ104APA	Carbon 100k 1/4W ±5%
R13	R2EDZJ223APA	Carbon 22k 1/4W ±5%
R14	R2EDZJ224APA	Carbon 220k 1/4W ±5%
R15	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R16	R2EDZJ473APA	Carbon 47k 1/4W ±5%
R17,18 19	R2EDZJ104APA	Carbon 100k 1/4W ±5%
R20	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R21	R2EDZJ104APA	Carbon 100k 1/4W ±5%
R22	R2EDZJ102APA	Carbon 1k 1/4W ±5%
R23	R2EDZJ104APA	Carbon 100k 1/4W ±5%
R24	R2EDZJ563APA	Carbon 56k 1/4W ±5%
R25	R2EDZJ102APA	Carbon 1k 1/4W ±5%
R26	R2EDZJ104APA	Carbon 100k 1/4W ±5%
R27	R2EDZJ102APA	Carbon 1k 1/4W ±5%
R28,29 30	R2EDZJ104APA	Carbon 100k 1/4W ±5%
R31	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R32	R2EDZJ104APA	Carbon 100k 1/4W ±5%
R33,34	R2EDZJ474APA	Carbon 470k 1/4W ±5%

MECHA P.C.BOARD
(BOTTOM VIEW)



M-A SWITCH P.C.BOARD
(BOTTOM VIEW)



PARTS LIST

MECHA P.C.B. Assy
131 0 4001 01710

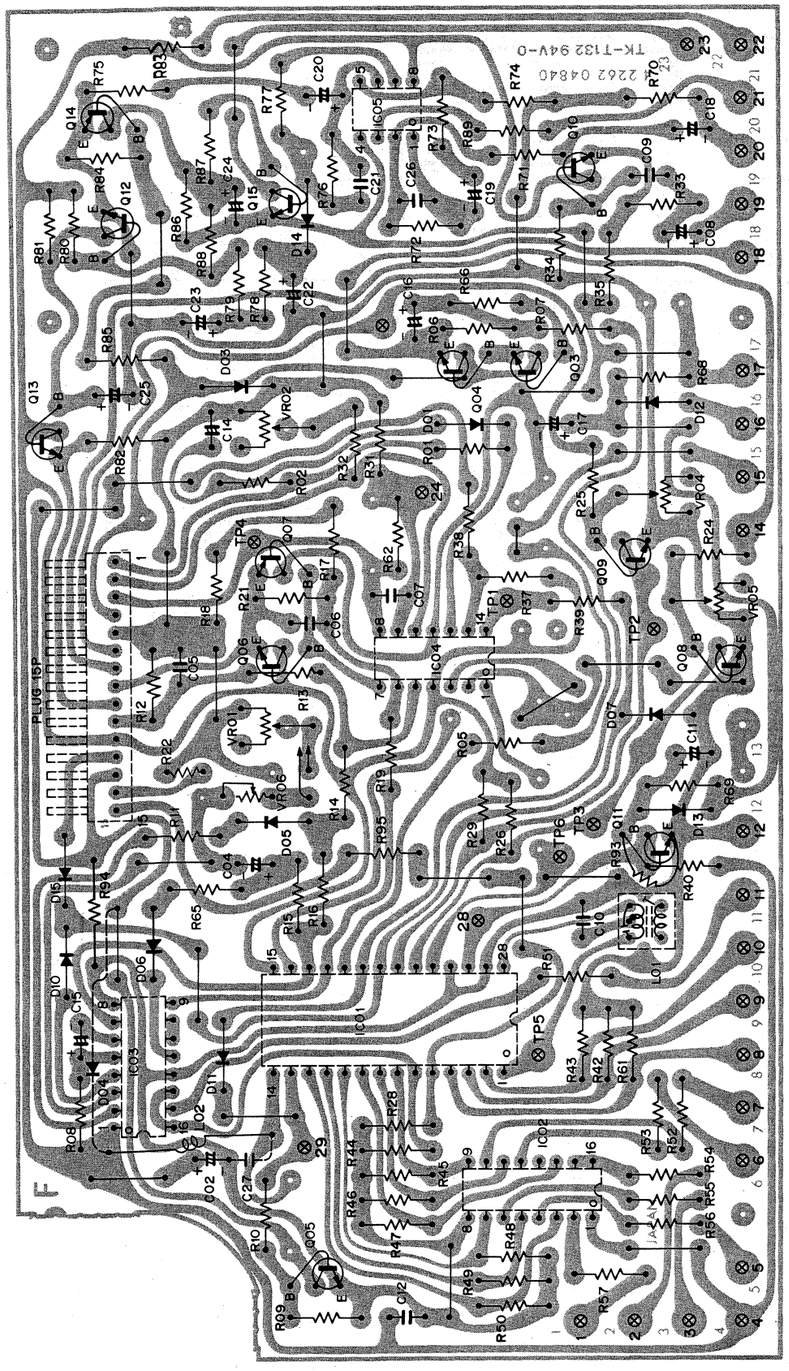
Ref. No.	Parts Number	Description
	4 2372 00060	Receptacle
	SEMICONDUCTORS	
D01,02	DOO-SLP-114A	Diode, SLP-114A
Q01,02	TOO-SPS-102	TR SPS-102

M-A SWITCH P.C.B. Assy
131 0 4001 01731

Ref. No.	Parts Number	Description
S01	4 2319 33500	Switch Slide 6P

MICROCOMPUTER CONTROL P.C.BOARD

(BOTTOM VIEW)



MICROCOMPUTED CONTROL P.C.BOARD IC PIN NUMBERS VOLTAGES

SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14
IC01	μPD554	6.4V	0.6V	0V	0V	0V	0V	0V	0V	0V	0V	0V	0V	0V	9.8V
		15	16	17	18	19	20	21	22	23	24	25	26	27	28
IC01	μPD554	9.8V	9.8V	0V	0V	9.8V	–12.4V	8.5V	5V	0V	0V	0V	0V	0V	6.1V

MICROCOMPUTED CONTROL P.C.BOARD TRANSISTOR DC VOLTAGES

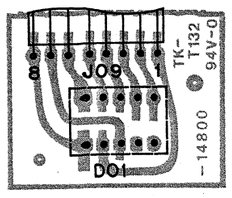
SYMBOL No.	DEVICE	B	C	E	SYMBOL No.	DEVICE	B	C	E
Q03	2SC536	–11.2V	0V	–11.9V	Q08	2SC536	0.7V	0V	
Q04	2SD863	–11.9V	0V	–12.4V	Q09	2SC536	0.7V	9.8V	
Q05	2SD863	0V	8.6V	0V	Q10	2SC536	–0.7V		
Q06	2SD863	0.6V	9.8V	0V	Q11	2SC536	0.7V	0V	
Q07	2SB764	0.6V	–10.3V	0V	Q12	2SC536	0.2V	9.7V	
Q03	2SC536	–11.2V	0V	–11.9V	Q13	2SC536	9.7V	9.8V	9.1V
Q04	2SA608	–11.9V	0V	–12.4V	Q14	2SA608	0V	–9.9V	0V
Q05	2SC536	0V	8.6V	0V	Q15	2SC536	–9.9V	9.8V	–10.4V

PARTS LIST

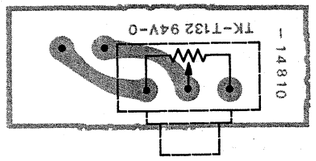
MICRO COMPUTED CONTROL P.C.B. Assy
131 0 4001 11041

Ref. No.	Parts Number	Description
	4 2362 00330	Plug JST 15P
L01	4 2582 00290	OSC Coil
L02	4 2532 00530	Choke Coil 39 μH
VR01	4 2222 00960	VR 100k-B
VR02	4 2222 01020	VR 200k-B
VR04	4 2222 01000	VR 5k-B
VR05	4 2222 01000	VR 5k-B
VR06	4 2222 01700	VR 100k-B
	CAPACITORS	
C02	C1CRE-107A	Electrolytic 100 μF 16V
C04	C1HREK105BL	Electrolytic 1 μF 50V ±10%
C05	C1HFYK103APA	Mylar 0.01 μF 50V ±10%
C06	C1HCYK331APA	Ceramic 330 pF 50V ±10%
C07	C1HFYK102APA	Mylar 0.001 μF 50V ±10%
C08	C1HRY-225APA	Electrolytic 2.2 μF 50V
C09	C1HFYK223APA	Mylar 0.022 μF 50V ±10%
C10	C1HSEJ471A	Styrol 470 pF 50V ±5%
C11	C1HRY-106APA	Electrolytic 10 μF 50V
C12	C1HFYK103APA	Mylar 0.01 μF 50V ±10%
C14	C1EAEN225A	Electrolytic 2.2 μF 25V
C15	C1CRY-106APA	Electrolytic 10 μF 16V
C16	C1ARY-476APA	Electrolytic 47 μF 10V
C17	C1VRY-106APA	Electrolytic 10 μF 35V
C18,19	C1HRY-225APA	Electrolytic 2.2 μF 50V
C20	C1CRY-106APA	Electrolytic 10 μF 16V
C21	C1HFYK103APA	Mylar 0.01 μF 50V ±10%
C22	C1HRY-105APA	Electrolytic 1 μF 50V
C23	C1ARY-226APA	Electrolytic 22 μF 10V
C24	C1ARY-476APA	Electrolytic 47 μF 10V
C25	C1ARE-107A	Electrolytic 100 μF 10V
C26	C1HCYK101APA	Ceramic 100 pF 50V ±10%
C27	CM104500K00SV	Mylar 0.1 μF 50V ±10%
	SEMICONDUCTORS	
D01	205 5 9040 44210	Diode, DS-442
D03,04	202 5 2470 13540	Diode, DS135D
D05,06 07,10,11	205 5 9040 44210	Diode, DS-442
D12	202 5 2470 13540	Diode, DS135D
D13,14 15	205 5 9040 44210	Diode, DS-442
IC01	4 9362 00010	IC, μPD554-017
IC02,03	IPP-MSM4049	IC, MSM4049
IC04	206 5 1296 32410	IC, LA6324
IC05	206 5 1686 45810	IC, LA6458D
Q03	203 5 5000 53650	TR 2SC536 E, F
Q04,05 06	203 5 7340 86350	TR 2SD863 E, F
Q07	203 5 7350 76450	TR 2SB764 E, F
Q08,09 10,11,12,13	203 5 5000 53650	TR 2SC536 E, F
Q14	203 5 7230 60850	TR 2SA608 E, F
Q15	203 5 5000 53650	TR 2SC536 E, F
	RESISTORS	
R01,02	R2EDZJ473APA	Carbon 47k 1/4W ±5%
R05,06 07	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R08	R2EDZJ223APA	Carbon 22k 1/4W ±5%
R09	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R10,11	R2EDZJ472APA	Carbon 4.7k 1/4W ±5%
R12	R2EDZJ4R7APA	Carbon 4.7 1/4W ±5%
R13	R2EDZJ471APA	Carbon 470 1/4W ±5%
R14	R2EDZJ153APA	Carbon 15k 1/4W ±5%
R15	R2EDZJ472APA	Carbon 4.7k 1/4W ±5%
R16	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R17	R2EDZJ221APA	Carbon 220 1/4W ±5%
R18	R2EDZJ150APA	Carbon 15 1/4W ±5%
R19	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R21	R2EDZJ102APA	Carbon 1k 1/4W ±5%
R22	R2EDPJ271A	Carbon 270 1/4W ±5%
R24,25	R2EDZJ681APA	Carbon 680 1/4W ±5%
R26	R2EDZJ223APA	Carbon 22k 1/4W ±5%
R28	R2EDZJ104APA	Carbon 100k 1/4W ±5%
R29	R2EDZJ223APA	Carbon 22k 1/4W ±5%
R31	R2EDZJ273APA	Carbon 27k 1/4W ±5%
R32	R2EDZJ333APA	Carbon 33k 1/4W ±5%
R33	R2EDZJ122APA	Carbon 1.2k 1/4W ±5%
R34	R2EDZJ154APA	Carbon 150k 1/4W ±5%
R35	R2EDZJ682APA	Carbon 6.8k 1/4W ±5%
R36	R2EDZJ105APA	Carbon 1M 1/4W ±5%
R37	R2EDZJ223APA	Carbon 22k 1/4W ±5%
R38,39	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R40	R2EDZJ472APA	Carbon 4.7k 1/4W ±5%
R42,43	R2EDZJ154APA	Carbon 150k 1/4W ±5%
R44,45 46,47,48,49,50	R2EDZJ223APA	Carbon 22k 1/4W ±5%
R51,52 53,54,55,56,57	R2EDZJ102APA	Carbon 1k 1/4W ±5%
R61	R2EDZJ104APA	Carbon 100k 1/4W ±5%
R62	R2EDUJ334A	Carbon 330k 1/4W ±5%
R65	R2EDZJ102APA	Carbon 1k 1/4W ±5%
R66	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R68	R2EDZJ472APA	Carbon 4.7k 1/4W ±5%
R69	R2EDZJ563APA	Carbon 56k 1/4W ±5%
R70	R2EDZJ104APA	Carbon 100k 1/4W ±5%
R71	R2EDZJ102APA	Carbon 1k 1/4W ±5%
R72	R2EDZJ224APA	Carbon 220k 1/4W ±5%
R73	R2EDZJ123APA	Carbon 12k 1/4W ±5%
R74	R2EDZJ104APA	Carbon 100k 1/4W ±5%
R75	R2EDZJ122APA	Carbon 1.2k 1/4W ±5%
R76	R2EDZJ334APA	Carbon 330k 1/4W ±5%
R77	R2EDZJ122APA	Carbon 1.2k 1/4W ±5%
R78	R2EDZJ562APA	Carbon 5.6k 1/4W ±5%
R79	R2EDZJ333APA	Carbon 33k 1/4W ±5%
R80	R2EDZJ274APA	Carbon 270k 1/4W ±5%
R81	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R82	R2EDZJ333APA	Carbon 33k 1/4W ±5%
R83	R2EDZJ561APA	Carbon 560 1/4W ±5%
R84	R2EDZJ333APA	Carbon 33k 1/4W ±5%
R85	R2EDZJ563APA	Carbon 56k 1/4W ±5%
R86	R2EDZJ822APA	Carbon 8.2k 1/4W ±5%
R87	R2EDZJ123APA	Carbon 12k 1/4W ±5%
R88	R2EDZJ224APA	Carbon 220k 1/4W ±5%
R89	R2EDZJ682APA	Carbon 6.8k 1/4W ±5%
R93	R2EDUJ103A	Carbon 10k 1/4W ±5%
R94	R2HXBJ391A	Oxide Metal Film 390 1/2W ±5%
R95	R2EDZJ103APA	Carbon 10k 1/4W ±5%

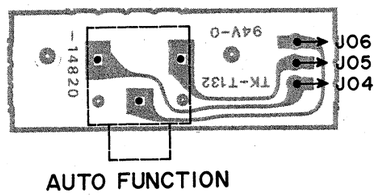
L.E.D. P.C.BOARD
(BOTTOM VIEW)



SPEED VOLUME P.C.BOARD
(BOTTOM VIEW)



JACK P.C.BOARD
(BOTTOM VIEW)



PARTS LIST

L.E.D. P.C.B. Assy
131 0 4001 13550

Ref. No.	Parts Number	Description
	SEMICONDUCTOR	
D01	DYY-LA-301VB	L.E.D., LA-301VB (Red)

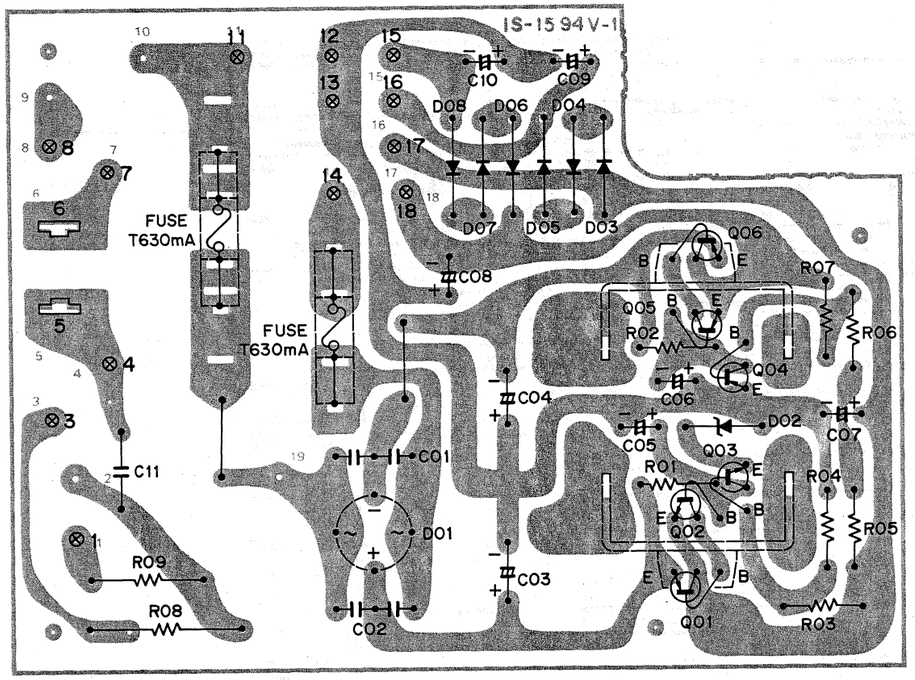
SPEED VOLUME P.C.B. Assy
131 0 4001 13560

Ref. No.	Parts Number	Description
	4 2222 01130	VR 10k-Bx1

JACK P.C.B. Assy
131 0 4001 13570

Ref. No.	Parts Number	Description
	4 2352 01730	Jack 3P

POWER SUPPLY P.C.BOARD
(BOTTOM VIEW)



POWER SUPPLY P.C.BOARD TRANSISTOR DC VOLTAGES									
SYMBOL No.	DEVICE	B	C	E	SYMBOL No.	DEVICE	B	C	E
Q01	2SB507	19.2V	12.1V	19.8V	Q04	2SA608	–0.6V	–13.0V	0V
Q02	2SC536	12.7V	19.2V	12.1V	Q05	2SA608	–13.0V	–20.4V	–12.4V
Q03	2SC536	6.6V	12.7V	5.9V	Q06	2SD313	–20.4V	–12.4V	–21.0V

PARTS LIST

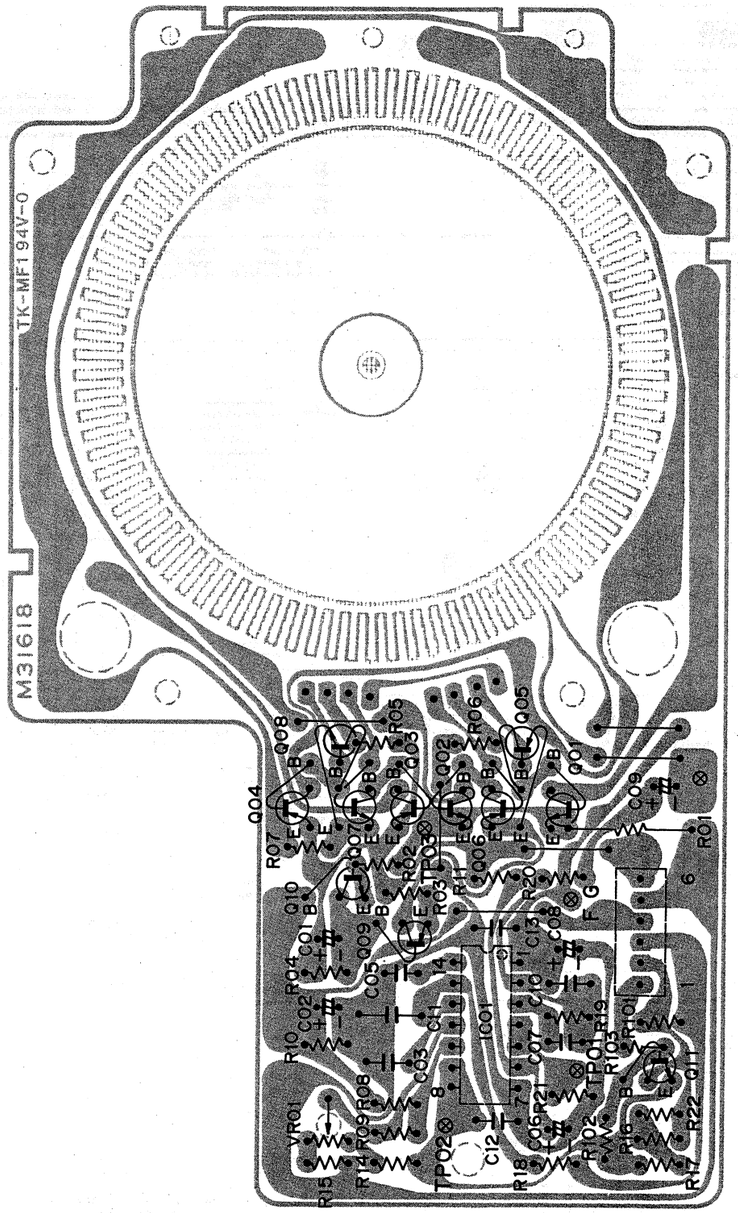
POWER SUPPLY P.C.B. Assy
131 0 4001 13581

Ref. No.	Parts Number	Description
⚠	4 2349 20400	Fuse T630 mA
	CAPACITORS	
C01,02	⚠ 4 2232 00430	Ceramic 0.01 μF x2 250V
C03,04	4 2232 00690	Electrolytic 2200 μF 25V
C05,06	C1HRE-474A	Electrolytic 0.47 μF 50V
C07,08	C1CRE-107A	Electrolytic 100 μF 16V
C09	C1CRE-476A	Electrolytic 47 μF 16V
C10	C1CRE-227A	Electrolytic 220 μF 16V
C11	4 2239 70970	Ceramic 0.01 μF 400V
	SEMICONDUCTORS	
D01	⚠ DGG-W02	Bridge Diode, W02
D02	202 5 3210 06211	Zener Diode, GZA6.2X
D03,04 05,06 07,08	202 5 2500 13541	Diode, DS135D

Ref. No.	Parts Number	Description
	SEMICONDUCTORS	
Q01	203 5 8510 50750	TR 2SB507 D, E
Q02,03	203 5 5000 53650	TR 2SC536 E, F, G
Q04,05	203 5 7230 60850	TR 2SA608 E, F, G
Q06	203 5 8550 31350	TR 2SD313 E, D
	RESISTORS	
R01	R2EDPJ122A	Carbon 1.2k 1/4W ±5%
R02	R2EDPJ332A	Carbon 3.3k 1/4W ±5%
R03	R2EDPJ182A	Carbon 1.8k 1/4W ±5%
R04	R2EDPJ222A	Carbon 2.2k 1/4W ±5%
R05	R2EDPJ332A	Carbon 3.3k 1/4W ±5%
R06	R2EDPJ182A	Carbon 1.8k 1/4W ±5%
R07	R2EDPJ472A	Carbon 4.7k 1/4W ±5%
R08	RH562501JZ	Oxide Metal Film 5.6k 1/2W ±5%
R09	RH472501JZ	Oxide Metal Film 4.7k 1/2W ±5%

MOTOR CONTROL P.C.BOARD

(BOTTOM VIEW)

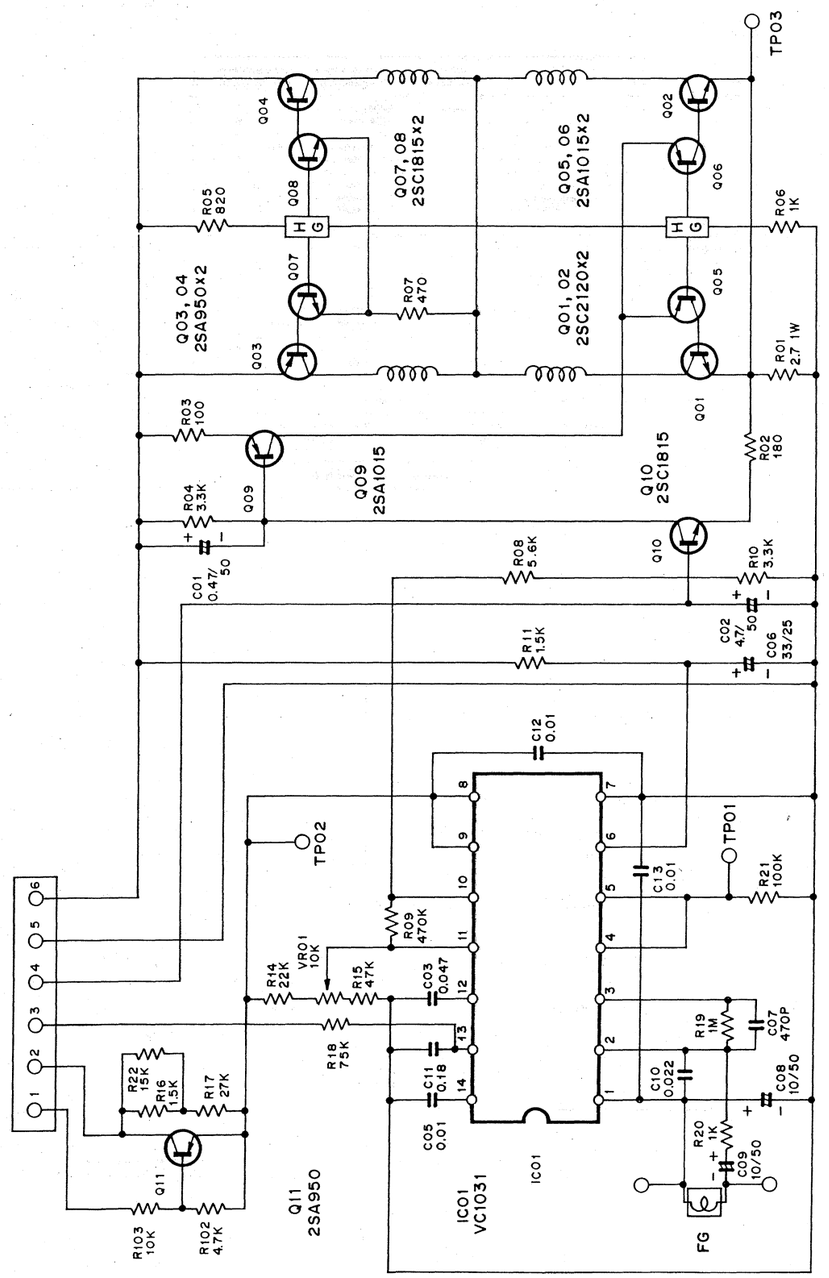


CAUTION

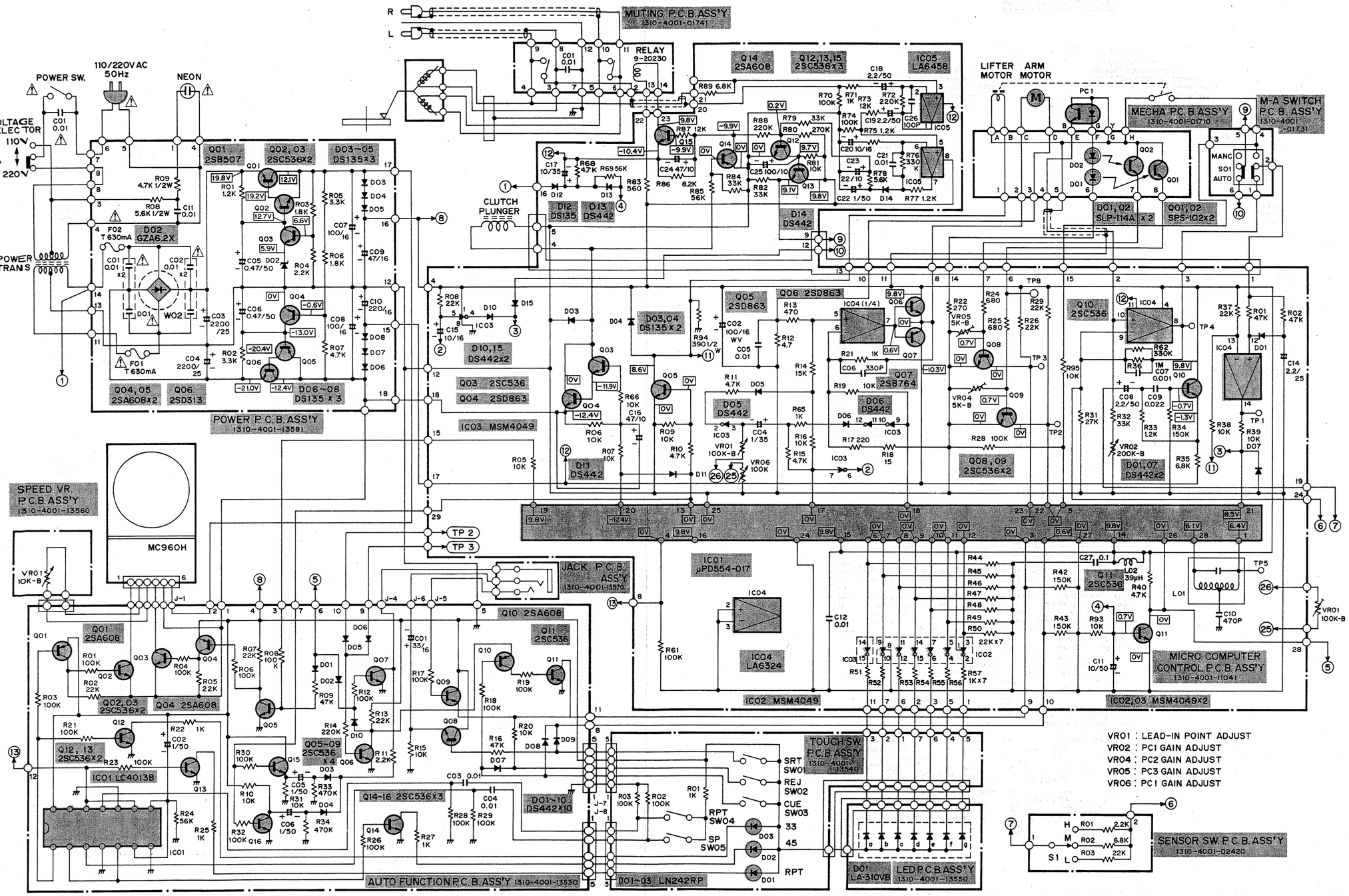
Should the Servo motor, control P.C.B. assembly or any of the transistors, diodes, volume controls, resistors, capacitors, etc. installed on the control P.C.B. assembly develop trouble, do not replace only the faulty parts but the motor and the control P.C.B. assembly as well.

This is necessary because the control P.C.B. assembly is finely adjusted to match the performance characteristics of the motor. If only the faulty parts have been replaced, we shall not be held responsible for deterioration in the performance of the unit.

MOTOR CONTROL SCHEMATIC DIAGRAM



SCHEMATIC DIAGRAM



PRODUCT SAFETY NOTICE

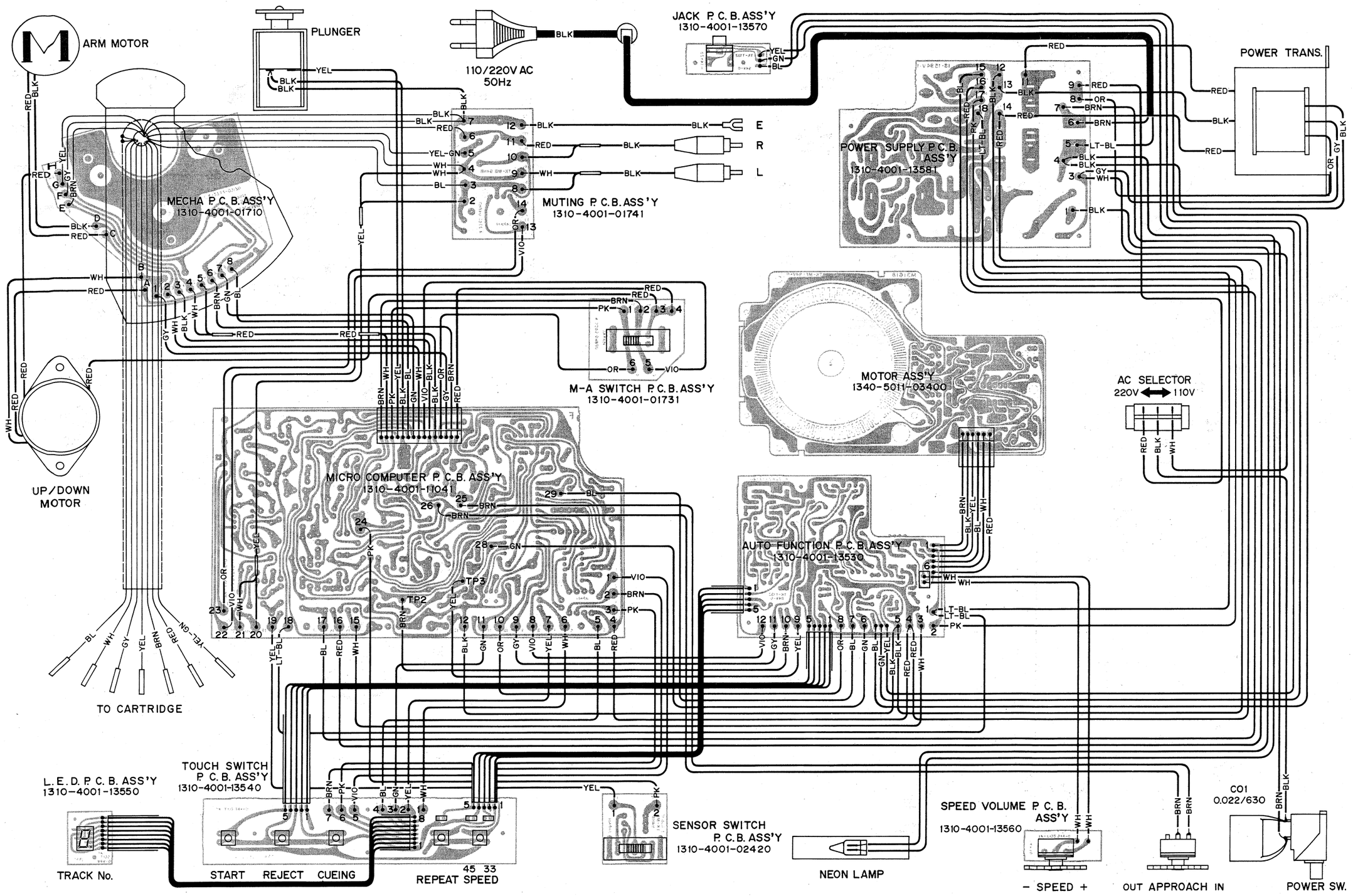
Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual.
Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

NOTES:

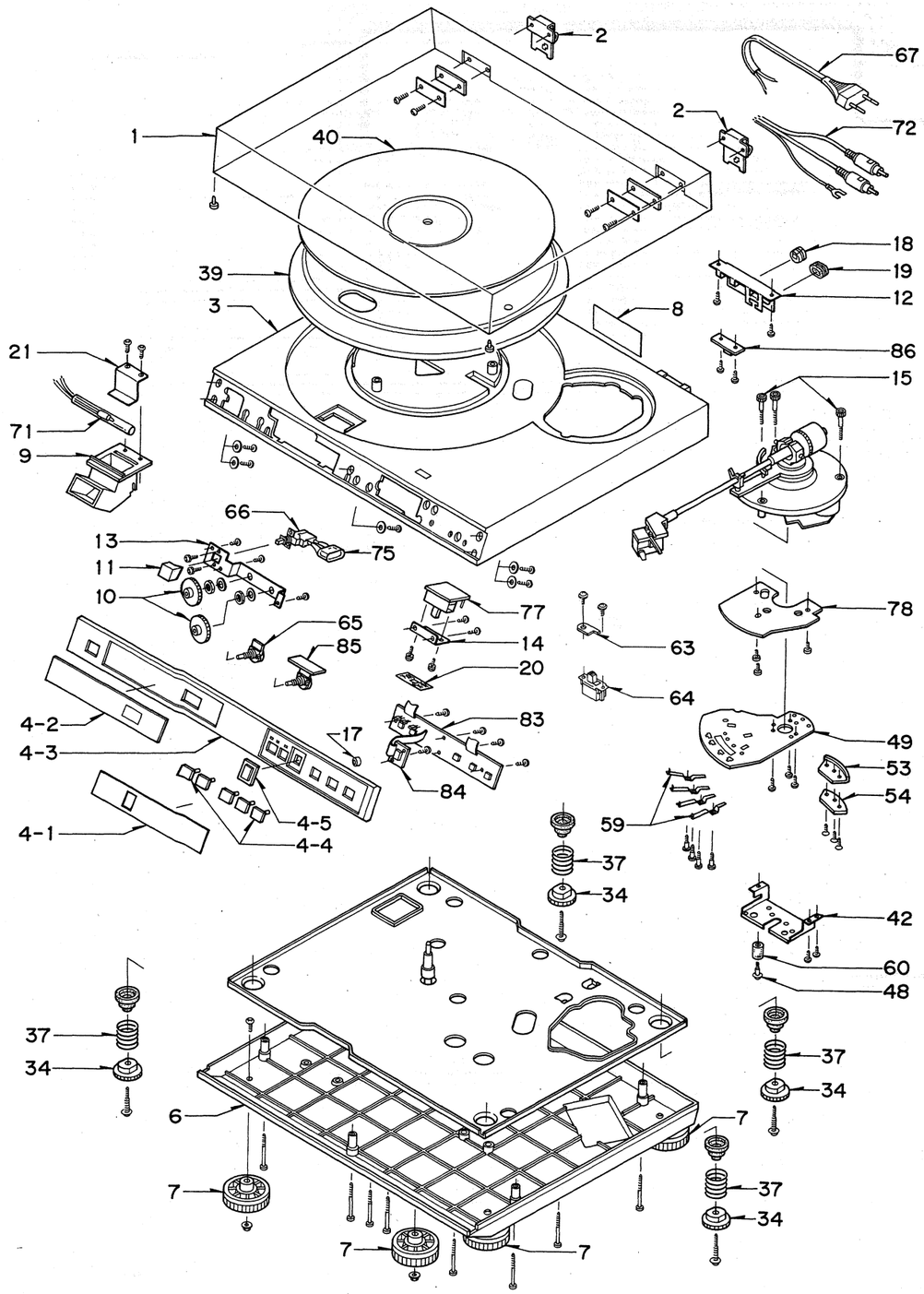
1. All resistors values are indicated in "ohm" (K=10^3, M=10^6).
2. All capacitors values are indicated in "μF" (P=10^{-12}).
3. All voltages indicated on the schematics are measured under the following conditions.
   a. Use a V.T.V.M.
   b. All voltages ±10% with respect to chassis ground
   c. No signals at input terminals
   d. AC input at 220 volts 50 Hz
4. This is a basic schematic diagram.

Because Fisher products are subject to continuous improvement, Fisher Corporation reserves the right to make any changes or modifications without notice.

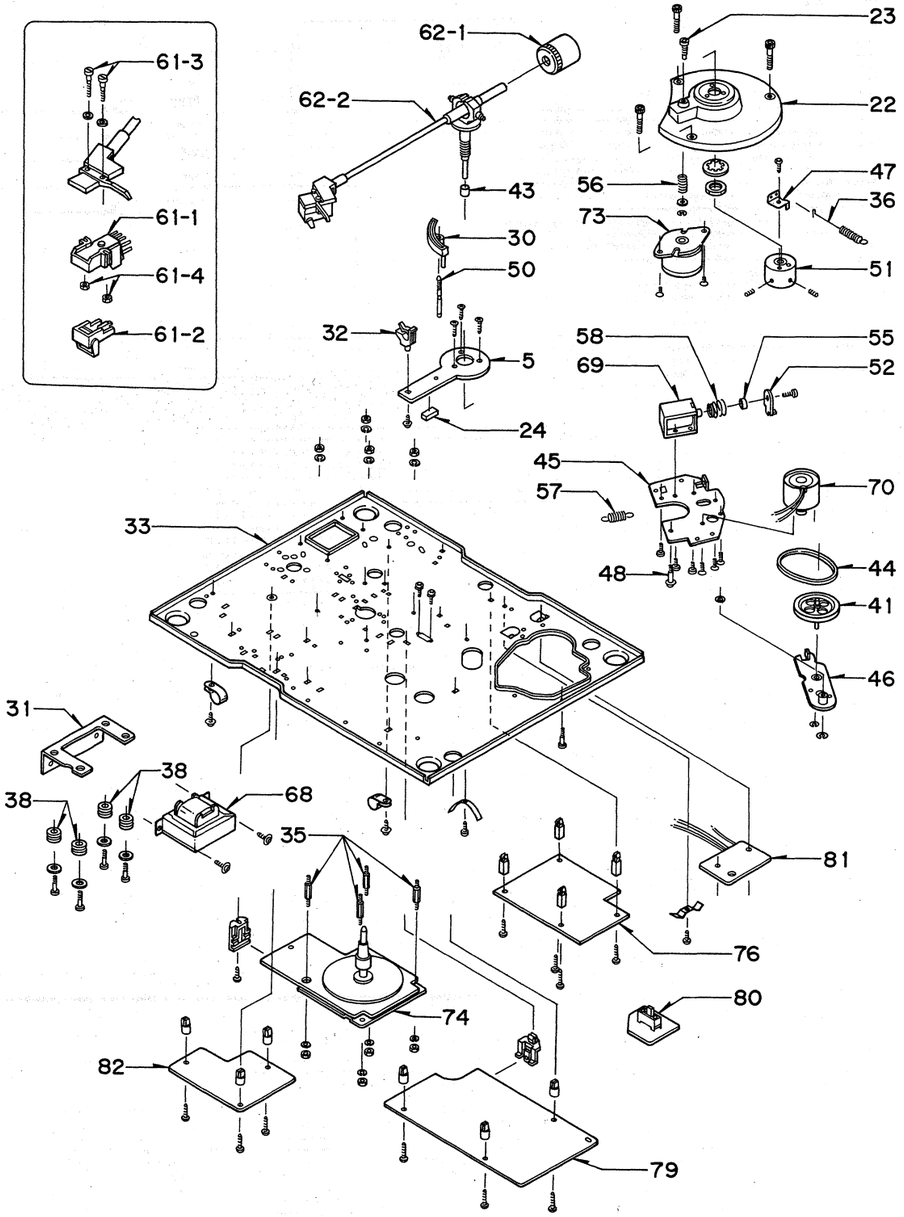
POINT TO POINT WIRING DIAGRAM



CABINET & TURNTABLE EXPLODED VIEW(1)



CABINET & TURNTABLE EXPLODED VIEW(2)



PARTS LIST

PACKING PARTS LIST

Ref. No.	Parts Number	Description
	131 6 1139 79719	Box Corrugate-EXP
	131 6 2119 01470	Bag Polyethylene-EXP
	131 6 2119 02061	Bag Polyethylene-EXP
	131 6 2519 00203	Bag Polyethylene-EXP
	131 6 2519 01300	Bag Polyethylene Ind.
	131 6 3009 28140	Pad (Side)
	131 6 3009 28150	Pad (Side)
	131 6 3009 28690	Pad (Arm)
	131 6 3009 28720	Pad (Lid Rear)
	131 6 3009 28730	Pad (Cabinet Front)
	131 6 3069 16040	Patching Sheet

ACCESSORIES PARTS LIST

Ref. No.	Parts Number	Description
	4 2369 74031	Plug Cord
	131 6 2519 01300	Bag Polyethylene Ind.
	131 6 2719 10801	Bag Fan
	142 6 4119 31751	Explanatory Booklet
	131 6 4519 15700	Guarantee Certificate
	134 2 2901 10700	Adaptor EP

CABINET PARTS LIST

Ref. No.	Parts Number	Description
1	131 0 2022 90261	Lid Assy
	131 2 1107 21600	Lid
	131 2 2904 12300	Pad Lid
2	131 0 2002 15000	Hinge Assy
3	131 2 1101 40513	Cabinet (Top)
4	131 0 1016 43300	Panel Decorative Assy
4-1	131 2 1203 61100	Panel Control
4-2	131 2 1203 61200	Panel Control
4-3	131 2 3305 35600	Panel Front
4-4	131 2 4208 44300	Spacer
4-5	131 2 6308 22900	Filter
5	131 2 1110 24701	Plate Decorative
6	131 2 1101 40600	Cabinet (Bottom)
7	131 0 1003 13300	Leg Assy
8	131 2 1310 38576	Name Plate
9	131 2 1410 22300	Cover
10	131 2 1601 56800	Knob (Volume)
11	131 2 1601 83703	Knob (Power)
12	131 2 3101 95101	Metal Mount (Phono)
13	131 2 3101 95200	Metal Mount Switch
14	131 2 3604 15400	Metal Mount Switch
15	131 2 4201 18503	Screw
17	131 2 4208 34000	Spacer
18	131 2 6111 14200	Bushing
19	131 2 6111 15800	Bushing
20	131 2 6113 34300	Shelter
21	131 2 6306 11700	Reflector
22	134 2 3201 12900	Base Pick-up
23	134 2 4118 19100	Boss
24	134 2 6307 00100	Magnet Bias

CABINET PARTS LIST

Ref. No.	Parts Number	Description
•	131 2 4202 12904	Nut 7 – 4
•	131 2 4201 20702	Screw 3x35 6 – 8
•	131 2 4201 19502	Screw (Screw Button Head Tapping B-TIPE 3) 4 – 5, 13 – 3, 3 – 4, 12 – 1
•	101 3 1504 01406	Screw, Truss Head 4.0x14 7 – 4
•	131 2 4201 19501	Screw (Screw, Button Head Tapping B-TITE 3) 9 – 2, 14 – 2
•	131 2 4201 19500	Screw (Screw, Button Head Tapping B-TITE 3) 3 – 1, 12 – 1, 3 – 2
•	102 3 1403 01003	Screw, Flat Head Tapping 1 3.0x10 5 – 3
•	131 2 4201 19900	Screw (SEMS 3x6) 13 – 2
•	131 2 4201 19701	Screw, Pan Head 2.6x5 14 – 2
•	131 2 4203 83217	Washer, Plain 3.2x13x1.0 4 – 5, 3 – 1

TURNTABLE PARTS LIST

Ref. No.	Parts Number	Description
30	131 0 2001 12500	Support Arm Assy
31	131 2 3617 17200	Metal Mount Transformer
•	131 2 4201 21800	Screw 3 – 4
•	131 2 4203 83201	Washer, Plain 3.2x10x0.5 31 – 4
32	134 0 6031 12000	Arm Rest Assy
33	134 2 2101 13700	Unit Plate
34	134 2 2106 11300	Holder
35	134 2 4208 16300	Spacer
36	134 2 5101 30200	Spring (IFC)
37	134 2 5102 14000	Spring Mounting
38	134 2 5202 11800	Rubber Cushion
39	134 2 6101 12902	Turntable
40	134 2 6102 15802	Mat Turntable
•	104 3 1103 00002	Nut, Hex Head 1 3.0 35 – 8
•	102 3 2203 00802	Screw, Button Head Tapping 2 3.0x8 33 – 1
•	131 2 4201 23501	Screw 32 – 1
•	131 2 4201 18000	Screw 31 – 2
•	131 2 4201 19701	Screw, Pan Head 2.6x5 33 – 2
•	102 3 2203 01801	Screw, Button Head Tapping 2 3.0x18 33 – 4
•	102 3 2203 01401	Screw, Button Head Tapping 2 3.0x14 33 – 4
•	102 3 2203 00601	Screw, Button Head Tapping 2 3.0x6 33 – 2

PARTS LIST (Continued)

TURNTABLE PARTS LIST

Ref. No.	Parts Number	Description
•	131 2 4201 19501	Screw (Screw, Button Head Tapping B-TIPE 3) 33 – 1
•	105 3 1203 00002	Washer, Spring 3.0 35 – 8
•	101 3 1203 00811	Screw, Flat Head 3.0x8 54 – 3
41	131 0 3020 11700	Pulley Assy
42	131 2 1410 20900	Cover
•	131 2 4201 15203	Screw M4x10 51 – 2
•	131 2 4203 13800	Washer 50 – 1
43	131 2 4208 26801	Spacer
44	131 2 4804 00300	Rubber Belt
45	134 0 6037 11800	Base Assy
46	134 0 6038 00300	Arm Clutch Assy
47	134 2 2403 21200	Angle Mount
48	134 2 4106 23900	Shaft
49	134 2 4108 28200	Plate Control
50	134 2 4116 13100	Spindle Lifting
51	134 2 4118 17901	Boss
52	134 2 4121 11900	Guide
53	134 2 4131 00200	Rubber Friction
54	134 2 4203 02900	Washer Weight
55	134 2 4208 15400	Spacer
56	134 2 5101 27300	Spring
57	134 2 5102 14100	Spring Arm
58	134 2 5102 14200	Spring Solenoid
59	134 2 5103 10800	Spring Shelter
60	134 2 5202 11201	Rubber Cushion
•	141 2 4219 14000	Screw 59 – 4
•	131 2 4206 12000	Ring E 2 56 – 1, 41 – 1
•	108 3 1103 00007	Ring E 3.0 46 – 1
•	102 3 1403 01003	Screw, Flat Head Tapping 1 3.0x10 49 – 2
•	101 3 1203 00604	Screw, Flat Head 3.0x6 69 – 2
•	101 3 1203 00802	Screw, Flat Head 3.0x8 45 – 1
•	101 3 1103 00603	Screw, Pan Head 3.0x6 52 – 1, 45 – 1
•	101 3 1103 00401	Screw, Pan Head 3.0x4 45 – 3
•	131 2 4201 13700	Screw (Taptite) 3x6 73 – 2
•	102 3 1202 60502	Screw, Pan Head Tapping 2 2.6x5 47 – 1
•	102 3 2203 00601	Screw, Button Head Tapping 2 3.0x6 42 – 2
•	102 3 2203 01001	Screw, Button Head Tapping 2 3.0x10 49 – 1
•	131 2 4201 13505	Screw 49 – 1
•	131 2 4203 83222	Washer, Plain 3.2x8x0.3 41 – 1
•	131 2 4203 84233	Washer, Plain 4.2x10x0.3 46 – 1

TURNTABLE PARTS LIST

Ref. No.	Parts Number	Description
•	105 3 1203 00002	Washer, Spring 3.0 49 – 1
61	134 0 4009 03600	Pick-up Assy
62	134 0 4001 10900	Tone Arm Assy
62-1	134 0 4003 03600	Weight Assy
62-2	134 0 4004 05400	PU Arm Assy
61-1	134 0 4008 00100	Cartridge Assy (MG-100S)
61-2	4 1579 29330	Pick-up Stylus (ST-100SD)
61-3	131 2 4201 30200	Screw
61-4	134 2 4202 13600	Nut

ELECTRICAL PARTS

Ref. No.		Parts Number	Description
63		131 2 7104 00101	Plate Pad Switch (Slide Switch)
64	⚠	4 2312 02650	Switch Slide 3P
65		4 2222 02760	VR 100k-Bx1
66	⚠	4 2312 05060	Switch Push Power
67	⚠	4 2432 00071	Line Cord
68	⚠	4 2512 21920	Power Transformer
69		4 2642 00020	Plunger
70		4 5272 00010	Comutate Mot Magnet
71	⚠	4 6122 03300	Pilot Lamp
72		131 0 4004 16100	Wire Shield Assy
73		134 0 5011 01002	Motor Assy (Up Down)
74		134 0 5011 03400	Motor Assy
75(C01)	⚠	C2JNRM223C	Polypropylene 0.022 μF 630V ±20%
76		131 0 4001 13581	Power Supply P.C.B. Assy
77		131 0 4001 02420	Sensor Switch P.C.B. Assy
78		131 0 4001 01710	Mecha P.C.B. Assy
79		131 0 4001 11041	Micro Computed Control P.C.B. Assy
80		131 0 4001 01731	M-A Switch P.C.B. Assy
81		131 0 4001 01741	Muting P.C.B. Assy
82		131 0 4001 13530	Auto Function P.C.B. Assy
83		131 0 4001 13540	Touch Switch P.C.B. Assy
84		131 0 4001 13550	L.E.D. P.C.B. Assy
85		131 0 4001 13560	Speed Volume P.C.B. Assy
86		131 0 4001 13570	Jack P.C.B. Assy

Note: • Indicates not a service part. The numbers for screws, nuts, and washers, shown in Description, correspond with Ref. Nos. of the parts using these screws, nuts and washers.

Example: 3 – 2

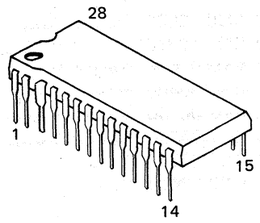
3 means	**Ref. No.**
2 means	**Q'ty.**

PRODUCT SAFETY NOTICE

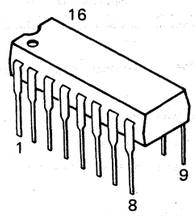
Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual.
Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

SEMICONDUCTOR LEAD IDENTIFICATION

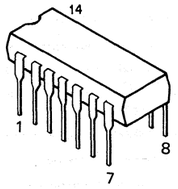
INTEGRATED CIRCUITS



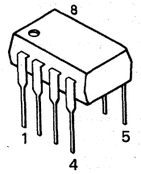
- μPD554-017



- MSM4049

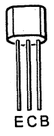


- LA6324
- LC4013B

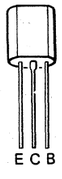


- LA6458D

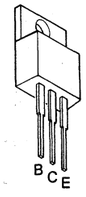
TRANSISTORS



- 2SC536
- 2SA608

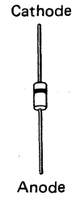


- 2SB764
- 2SD863

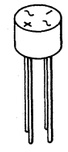


- 2SB507
- 2SD313

DIODES



- DS135D
- DS442
- GZA6.2X



- W02

FISHER

Service/Ersatzteillager:
FISHER HiFi Europa Vertriebs-GmbH
Shönstraße 80, 8000 München 90
Telefon 0 89/23 79-1
Telex 5-212384 D
Wenden Sie sich bitte mit technischen Fragen an diese Adresse.

Verwaltung, Verkauf und Auslieferungslager:
FISHER HiFi Europa Vertriebs-GmbH
Truderingerstraße 13, 8000 München 80
Telefon 0 89/41 45-0
Telex 5-24665 D
5-24033 D

PRINTED IN JAPAN
'83/Jun. **WM-9733**